

Remark

Applicants respectfully request reconsideration of this application as amended. Claims 1, 4, 7, 10, 13, 15, 16, 18, 20, 21, 24, 26, 27, 29, 31, 32, 35, and 36 have been amended. Claims 3, 14, and 19 have been cancelled. Claims 38-41 have been added. Therefore, claims 1-2, 4-13, 15-18, and 20-41 are present for examination.

35 U.S.C. §103(a) Rejection

Rahman et al.

The Examiner has rejected claims 1-36 under 35 U.S.C. §103 (a) as being unpatentable over U.S. patent No. 5, 778,431 of Rahman et al. (hereinafter "Rahman"). The Applicant respectfully submits the following arguments pointing out significant differences between claims 1-36 submitted by the Applicant and Rahman.

As the Applicant understands the reference, Rahman relates to "a computer system . . . for selectively invalidating the contents of cache memory in response to the removal, modification, or disabling of system resources, such as for example, an external memory device." (Abstract) Under Rahman, a processor "compares cache memory tag address values with the address assigned to an external memory device." (col. 3, lines 12-14) "A lower and upper comparator compares each tag address from the cache memory with the values in the lower and upper registers, respectively." (col. 3, lines 19-22) "If a tag address is found which has a value within the window defined by the upper and lower address registers, it is invalidated and the corresponding data is flushed from the cache memory." (col. 3, lines 22-25) This process "can be implemented through software by instructions in microcode." (Abstract)

That is, Rahman discloses using two, presumably complete, tag address to identify a portion of cache memory to be flushed. An upper and a lower register are used to store these addresses. Any address falling between the upper and lower addresses is considered to be invalid and will be flushed from cache memory. This method is implemented in micro code, not a single instruction from a processor instruction set. Rahman does not teach or suggest using a data operand containing a portion of a starting address to invalidate data in a predetermined portion of the plurality of cache lines in response to receiving a single instruction of a processor instruction set.

Claims 1-36 of the invention submitted by the Applicant relate to using a data operand containing a portion of a starting address to invalidate data in a predetermined portion of the plurality of cache lines in response to receiving a single instruction of a processor instruction set. That is, a portion of a single address is used to identify a starting point in the cache and a predetermined portion of the cache is then flushed. Claims 4, 9, 15, 20, 27, and 32 identify the portion of the starting address to include a plurality of most significant bits of the starting address. Claims 6, 11, 17, 22, 28, and 33 identify the predetermined portion of the plurality of cache lines to be a page in the cache memory. Rahman does not teach or suggest using a data operand containing a portion of a starting address to invalidate data in a predetermined portion of the plurality of cache lines in response to receiving a single instruction of a processor instruction set. Additionally, Rahman does not teach or suggest that the portion of the starting address to include a plurality of most significant bits of the starting address as disclosed by claims 4, 9, 15, 20, 27, and 32 or that the predetermined portion of the plurality of cache lines to be a page in the cache memory as disclosed by claims 6, 11, 17, 22, 28, and 33. For at least these reasons, claims 1-36, as amended, are distinguishable from Rahman.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

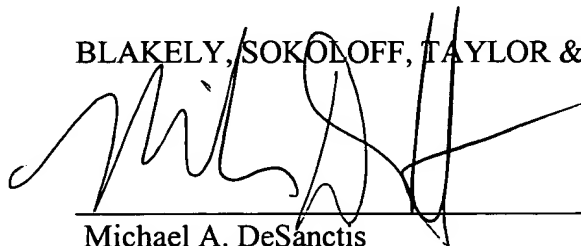
Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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